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(54) ELECTROSTATIC CHUCK MEMBER AND PRODUCTION THEREOF

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain an electrostatic chuck member having high volume resistivity with low fluctuation in which the quality is stabilized by providing an undercoat on a metal substrate through metallic spraying and then providing a ceramic spray coating containing a specified compound thereon.

SOLUTION: An undercoat is provided on a metal substrate through metallic spraying and a coating of Al₂O₃.TiO₂ based ceramic containing a Ti_nO_{2n-1} (n=1-9) type compound is provided thereon by spraying. The metallic spray coating is 30-150µm thick and the Al₂O₃.TiO₂ based ceramic spray coating containing a Ti_nO_{2n-1} (n=1-9) type compound is 50-500µm. The Al₂O₃.TiO₂ based ceramic spray coating containing a Ti_nO_{2n-1} (n=1-9) type compound has porosity of 0.4-3.0% and surface roughness Ra of 0.1-2.0µm. The Al₂O₃.TiO₂ based ceramic spray coating has a hole sealing layer on the surface and the volume resistivity thereof is in the range of 1×10⁻⁹-1×10¹¹Ω.cm.